1000

| Parse source information | 1100 |

↓

| Express information in work document in XML | 1200 |

↓

| Transform portion of work document using pattern-based rules | 1300 |

↓

| Generate options for translating an information element | 1400 |

↓

| Create GUI elements for options for translating information element | 1500 |

↓

| Transform portion of work document based on user input | 1600 |

↓

| Import work document into target system | 1700 |

Fig. 1

2000
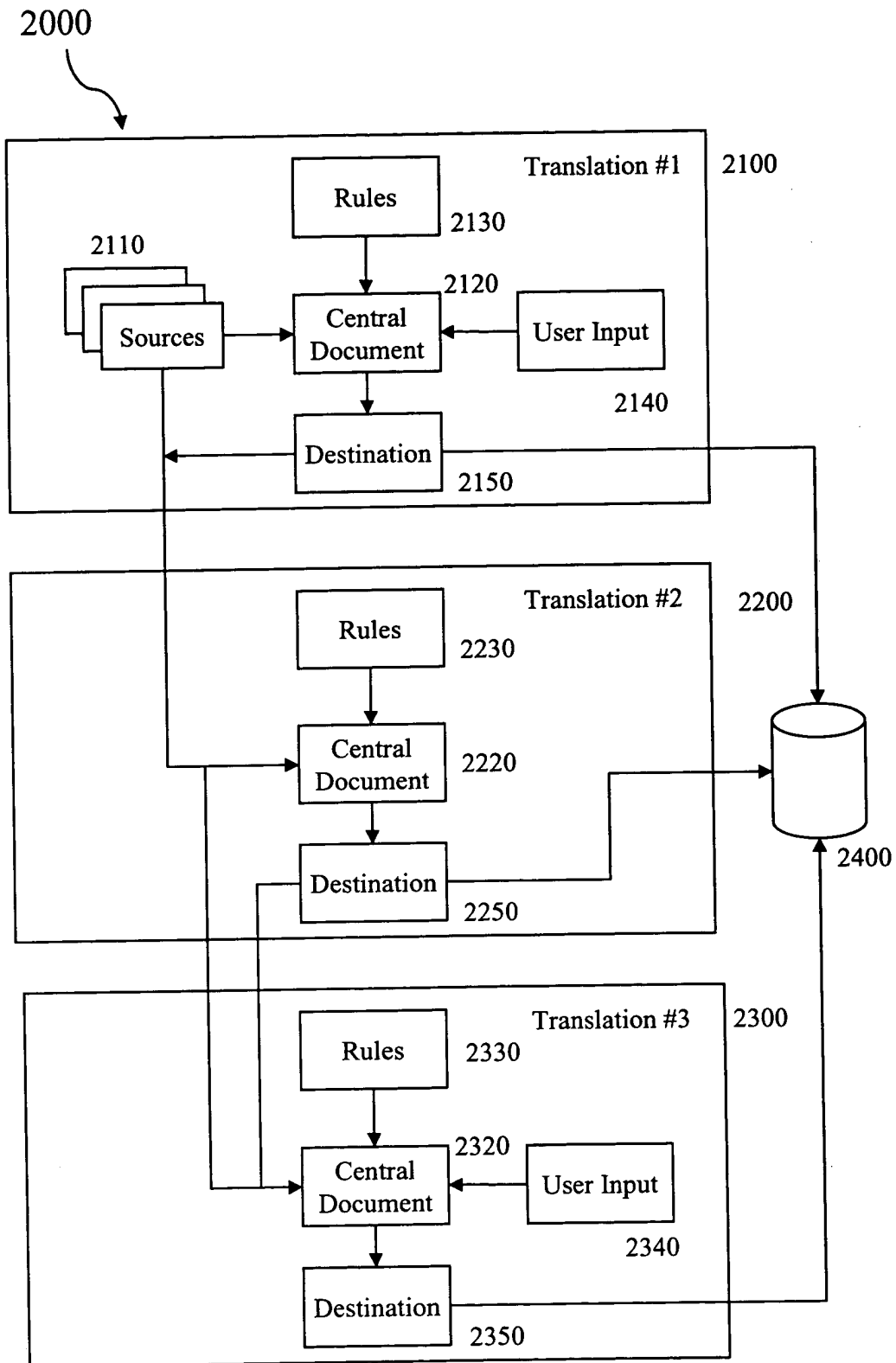

Fig. 2

3000

```
<?xml version="1.0"?>
<Order>
<Item
id='Turkey Sub'
size="large"
customer="Joseph Schmoe"
price="3.50"/>
<Item
id='Diet Coke'
size="medium"
customer="Joseph Schmoe"
price="0.90"/>
<Item
id="Fritos, 1.5 oz"
customer="Joseph Schmoe"
price="0.75" />
<Item
id='Hamburger'
size="medium"
customer="Betty Schmoe"
price="2.50"/>
<Item
id='Fries'
size="medium"
customer="Betty Schmoe"
price="0.99" />
<Item
id="Diet Coke"
size="medium"
customer="Betty Schmoe"
price="0.90" />
</Order>
```

Fig. 3

4000

```
<xsl:transform version="1.0"
   xmlns:xsl="http://www.w3.org/1999/XSL/Transform"
   xmlns:Prefs="Prefs">
   <xsl:output method="xml" encoding="UTF-8" indent="yes" />

   <Prefs:Prefs customer="Joseph Schmoe">
      <Item id="Turkey Sub">
        <detail description="no mayo"/>
        <detail description="no onions"/>
        <detail description="extra lettuce" price="0.50" />
        <detail description="extra tomato" price="0.50" />
      </Item>
      <Item id="Grilled Chicken Sandwich">
        <detail description="no mayo"/>
      </Item>
      <Item id="Diet Coke">
         <detail description="no ice"/>
      </Item>
   </Prefs:Prefs>

   <xsl:template match="/Order">
      <xsl:copy>
         <xsl:apply-templates select="Item"/>
      </xsl:copy>
   </xsl:template>

   <xsl:template name="CustomizeItem" match="Item">
      <xsl:param name="CustomerName" select="./@customer" />
      <xsl:param name="ItemID" select="./@id" />
      <xsl:param name="CustomerPrefs"
         select="document('')/*/Prefs:*[@customer=$CustomerName]"/>
      <xsl:param name="CustItem"
         select="$CustomerPrefs/Item[@id=$ItemID]" />
         <Item id="{@id}"
            customer="{@customer}"
            special="{count($CustomerItem)>0}"
            base_price="{@price}"
            price="{./@price + sum($CustItem/detail/@price)}">
            <xsl:apply-templates
               select="$ CustItem/detail" mode="ApplyDetails"/>
         </Item>
   </xsl:template>

   <xsl:template name="ApplyDetails" match="*" mode="ApplyDetails">
      <xsl:copy-of select="." />
   </xsl:template>
</xsl:transform>
```

Fig. 4

5000

```xml
<?xml version="1.0" encoding="UTF-8"?>
<Order>
    <Item id="Turkey Sub" customer="Joseph Schmoe" special="true"
        base_price="3.50" price="4.5">
        <detail description="no mayo" />
        <detail description="no onions" />
        <detail description="extra lettuce" price="0.50" />
        <detail description="extra tomato" price="0.50" />
    </Item>
    <Item id="Diet Coke" customer="Joseph Schmoe" special="true"
        base_price="0.90" price="0.9" >
        <detail description="no ice" />
    </Item>
    <Item id="Fritos, 1.5 oz" customer="Joseph Schmoe" special="false"
        base_price="0.75" price="0.75" />
    <Item id="Hamburger" customer="Betty Schmoe" special="false"
        base_price="2.50" price="2.5" />
    <Item id="Fries" customer="Betty Schmoe" special="false"
        base_price="0.99" price="0.99"/>
    <Item id="Diet Coke" customer="Betty Schmoe" special="true"
        base_price="0.90" price="0.9" >
        <detail description="extra ice" />
    </Item>
</Order>
```

Fig. 5

6000

```
<xsl:transform version="1.0"
xmlns:xsl="http://www.w3.org/1999/XSL/Transform"
xmlns:Preferences="Preferences">
<xsl:output method="xml"  omit-xml-declaration="yes"
     encoding="UTF-8" indent="yes" />

<xsl:key name="KeyOrderByCustomer" match="Item"
     use="./@customer" />




<xsl:template match="/*">
<xsl:param name="CustomerFirstItem" select="//Item[count(.
| key('KeyOrderByCustomer', ./@customer )[1]) = 1]" />
<html>

<body >
<xsl:copy>
<xsl:apply-templates
select="$CustomerFirstItem"
mode="OrderByCustomer" />
</xsl:copy>
<form>Customer Comments<br/>
<input type="text"
name="'CustomerComments'" /><br/>
<input type="button"
name="'AcceptOrder'" value="Place Order"
onclick="SaveOrder.onclick();"/>

</form>
</body>
<xml id="SaveOrder"
onclick="
for(i=0;i!=document.forms.length;i++)
document.forms.item(i).innerHTML='_';
OrderXML=document.body.outerHTML;
OrderXML=OrderXML.replace('id=SaveOrder','id
=&quot;SaveOrder&quot;');

OrderDoc=new XctiveXObject('Msxml2.DOMDocument.4.0');
OrderDoc.loadXML(OrderXML);
OrderDoc.save('C://Documents and Settings//hogamx//My
Documents//Patent//order.xml');
"/>
</html>
</xsl:template>
```

Fig. 6

7000

```
<xsl:template name="OrderByCustomer" match="Item"
mode="OrderByCustomer">
<xsl:param name="CustomerName" select="@customer" />
<div><h2>
<xsl:value-of select="@customer"/> Order
<table >
<xsl:apply-templates
select="//Item[@customer=$CustomerName]"
mode="ListAndCustomizeItem" />
</table>
</h2></div>
</xsl:template>

<xsl:template name="ListAndCustomizeItem" match="Item"
mode="ListAndCustomizeItem">
<xsl:param name="CustomerName" select="./@customer" />
<xsl:param name="ItemType" select="./@type" />
<xsl:param name="CustomerPreferences"
            select="document(concat($CustomerName,
' Prefs.xml'))/Preferences" />
<xsl:param name="CustomerItemPreferences"
select="$CustomerPreferences/Item[@type=$ItemType]" />
<xsl:param name="ItemID"
select="concat($CustomerName,'item',position())" />
<tr><td>
<h3>
<xsl:value-of select="./@type"/>
</h3>
<Item type="{@type}"
      name="{$ItemID}"
      customer="{@customer}"
      special="{count($CustomerItemPreferences)>0}"
      base_price="{@price}"
      price="{./@price +
sum($CustomerItemPreferences/detail/@price)}">
<xsl:apply-templates select="$CustomerItemPreferences/detail"
mode="ApplyDetails">
<xsl:with-param name="ItemID" select="$ItemID" />
</xsl:apply-templates>
</Item>
</td></tr>
</xsl:template>
```

Fig. 7

8000

```
<xsl:template name="ApplyDetails" match="detail"
mode="ApplyDetails">
<xsl:param name="ItemID" select="''" />
<xsl:param name="DetailID"
select="concat($ItemID,'detail',position())" />
<detail  description="{@description}"
id="{$DetailID}" />
<tr><td></td><td><h4>
<xsl:value-of select="@description" />
<xsl:apply-templates select="." mode="Make-GUI">
<xsl:with-param name="DetailID"
select="$DetailID" />
</xsl:apply-templates>
</h4></td></tr>
</xsl:template>

<xsl:template name="Extra-GUI"
match="detail[starts-with(@description,'extra ')]"
mode="Make-GUI">
        <xsl:param name="DetailID" select="''" />
<xsl:param name="extra-item" select="./@description" />
<form>
<input TYPE="radio" NAME="'HowMuchExtra'"
onclick="document.getElementById('{$DetailID}').howmuchextra='
a little'"> a little
<xsl:value-of select="$extra-item" />
  </input>
    <input TYPE="radio" NAME="'HowMuchExtra'"
onclick="document.getElementById('{$DetailID}').howmuchextra='
a little'"> some
<xsl:value-of select="$extra-item" />
</input>
<input TYPE="radio" NAME="'HowMuchExtra'"
onclick="document.getElementById('{$DetailID}').howmuchextra='
a little'"> whole lotta extra <xsl:value-of select="$extra-
item" />
</input>
</form>
</xsl:template>

</xsl:transform>
```

Fig. 8

9000

Joseph Schmoe Order
Turkey Sub

      no mayo

      no onions

      extra lettuce

        ◯ a little extra lettuce   ◉ some extra lettuce   ◯ whole lotta extra extra lettuce

      extra tomato

        ◯ a little extra tomato   ◯ some extra tomato   ◉ whole lotta extra extra tomato

Diet Coke

      no ice

Fritos, 1.5 oz

Betty Schmoe Order
Hamburger

Fries

      no salt

Diet Coke

      extra ice

        ◉ a little extra ice   ◯ some extra ice   ◯ whole lotta extra extra ice

Customer Comments
| I love this place |

Place Order

Fig. 9

10000

```
<Order xmlns:Preferences="Preferences">
<Item type="Turkey Sub" name="Joseph Schmoeitem1"
customer="Joseph Schmoe" special="true"
base_price="5.5" price="6.5">
<detail description="no mayo"
id="Joseph Schmoeitem1detail1" />
<detail description="no onions"
id="Joseph Schmoeitem1detail2" />
<detail description="extra lettuce"
id="Joseph Schmoeitem1detail3"
howmuchextra="some" />
<detail description="extra tomato"
id="Joseph Schmoeitem1detail4"
howmuchextra="whole lotta" />
</Item>
<Item type="Diet Coke" name="Joseph Schmoeitem2"
customer="Joseph Schmoe" special="true"
base_price="0.9" price="0.9">
<detail description="no ice"
id="Joseph Schmoeitem2detail1" />
</Item>
<Item type="Fritos, 1.5 oz" name="Joseph Schmoeitem3"
customer="Joseph Schmoe" special="false" base_price="0.75"
price="0.75" />
<Item type="Hamburger" name="Betty Schmoeitem1"
customer="Betty Schmoe" special="false"
base_price="2.5" price="2.5" />
<Item type="Fries" name="Betty Schmoeitem2"
customer="Betty Schmoe" special="true"
base_price="0.99" price="0.99">
<detail description="no salt"
id="Betty Schmoeitem2detail1" />
</Item>
<Item type="Diet Coke" name="Betty Schmoeitem3"
customer="Betty Schmoe" special="true"
base_price="0.9" price="0.9">
<detail description="extra ice"
id="Betty Schmoeitem3detail1"
howmuchextra="a little" />
</Item>
</Order>
```

Fig. 10